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## Understanding the Role of Community and their Level of Participation in Conservation and Resource Management in Protected Area: A Study on Ranthambore National Park, Rajasthan, India

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ABSTRACT—Community participation in various stages of tourism development cannot be nealected for any type of destination to be flourished, as the new forms of tourism seek both the satisfaction of tourists as well as the locals. Moreover, involving the local people in destination planning, creating sufficient employment opportunities especially for the local youths, educating the local residents about the consequences of tourism on nature and natural resources, ensuring overall socio-economic growth and environmental protection etc. are essential for the sustainable development of any protected area. In this study, the authors have chosen Ranthambore National Park, located in Rajasthan as a case study (1) to explore the present status of tourism in terms of sustainable, ecotourism, and nature based tourism. (2) to highlight the community role and their involvement in resource management and conservation activities, and (3) to investigate the Government's and local NGOs' role in connecting the host community to various conservation and development practices in this protected land, which is also a prominent tourist destination in Raiasthan. The study is based on both primary and secondary data-collected from site and from different published research articles, book chapters, Rajasthan government policies, reports, tourism policies. NGOs' reports. articles on Ranthambore National Park, official websites of Rajasthan Tourism and the respective national park. Qualitative approach has been adopted for collecting the empirics of the paper. The findings reveal that the supportive nature of the local people in resource management & forest protection, and the positive measures taken by Rajasthan Government and the Local NGOs to promote this protected area as an eco-tourism hub and to conserve its natural resources through different community based initiatives, schemes and policies; ultimately help in making the pathway of sustainable ecotourism development. The study also points out that (1) implementing realistic ecotourism plan to overcome the lack of coordination between public and private sectors, and (2) increasing the level of literacy in this area, as well as making local people more aware of the importance and realities of nature conservation should be considered as the main priorities to accelerate the level of participation in future course of time.

**Keywords:** Conservation, Nature Protection, Resource Management, Community Participation, Community Empowerment, Sustainable Development

### INTRODUCTION

At present India's wildlife heritage is restricted and preserved in the national parks, sanctuaries and biosphere reserve. With increasing interest of naturalists in wildlife and natural environment, diversity of wildlife was acknowledged and given special status of protection depending upon the importance and need of the flora and fauna. The declaration of Wildlife Protection Act, 1972 became one of such instrument in protecting the wildlife. National parks, community conserved areas, nature reserves, wilderness areas are the examples of protected area that aims at nature

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protection, biodiversity conservation and develop the livelihood and social status. India has 104 National Parks and 543 wildlife sanctuaries covering an area of roughly 162099.47 sq. km (Source: National Wildlife Database Cell, Wildlife Institute of India, as on July, 2018), which is almost of 4.93% of the total land area of the country. Beside the government's initiatives and policies; involvement of locals in various stages of development, maintaining their beliefs and keeping their expectations is also mandatory for the sustainable development of these protected areas. Calvet-Mir et al. (2015) find lack of knowledge and conviction among the conservation practitioners of the Protected Areas. Therefore, it is suggested that the working bodies need to convey the information, messages and support for ensuing the overall participation of concerned community members in protection and conservation of resources.

### **OBJECTIVES**

The study based on Ranthambore National Park, located in Rajasthan revolves around three objectives and these are:

- 1. To explore the present status of tourism in Ranthambore National Park,
- 2. To highlight the community role and their involvement in resource management and conservation activities, and
- 3. To investigate the Government's role in connecting the host community to various conservation and development practices.

### STUDY AREA-RANTHAMBORE NATIONAL PARK

Ranthambore was declared as a Tiger Reserve in the year of 1973 and a National Park in 1982. 16 villages were located inside the park while 96 villages were located at the periphery of this Protected Area. During the time span from 1975 to 1979, the residents of 12 villages, located inside this National Park were rehabilitated in which families of 9 villages were settled in a huddle at the village named Kailashpuri. According to the State Forest Department, the people from Nagadi, Lahapur and Ranthambore were rehabilitated in 1979 at Gopalpura village. The local urban population, a mix of Hindus, Muslims and Jains, speak Hindi, however, most of them can understand little bit English also. The rural population predominantly consists of the Meena and Gujjar caste groups. The Gujjar were required to switch over their main traditional occupation from animal husbandry to settled agriculture after rehabilitation undertaken by the Forest Department. The Gujjar community also sell dairy product-mainly ghee and milk for their living at present. Today Ranthambhore has become one of the incredible hot spot of Indian wilderness conserved in the untouched environment of northern edge of central India. Ranthambore which began its life as hunting reserves is protected in nature at present. Ranthambore Tiger Reserve which was earlier known as Sawai Madhopur Wildlife Sanctuary, after the launch of Project Tiger, was amongst the first nine tiger reserves in India. The Ranthambhore National Park is located in the middle of the mountainous ranges of the Vindhyans and Arravali among the convergence of the Banas and Chambal rivers. This National Park is located between 76023' to 760 39' E longitude and 250 84' to 260 12' N longitude in the Sawai Madhopur district of Rajasthan. It is almost 15 km far from the Sawai Madhopur Town and is well connected by road and railway network. It has total area of 392.50 sq. km out of which 118 sq. km is buffer zone and 274.5 km is core area. It comes under the semi-arid, biotic province-4B Gujarat-Rajwara and Indian bio-geographic zone.

The name 'Ranthambore' is derived from the two hills located in this region namely 'Ran' and 'Thambore' and in ancient times it was known as 'Rana-Stambhapura' or 'city with wall of pillars'. In reality, its origin of resolution now dates as far back as the 8th century. In Sawai Madhopur, Rajasthan, there is Ranthambore Fort, which is said to have been built in the 1110 AD by the King Jayant of the Chouhan dynasty. Many historians said that in the 944 AD, King Sapaldaksha founded Ranthambhore. Some of the historians argued that a family member of King Hasti of Hastinapur, known as Rati Dev was the real creator. There is also Jogi Mahalan old palace of the King which turned into guesthouse outside the core area of the park that allows tourists a glance of the lavish lifestyles of the ancient times and also supports tourism in the area. There are several villages alongside the boundary of the buffer zone and the core area. The villages of Kundera, Mokhali, Ranwali, Shampur and Chakeri are situated to the north of the Ranthambhore Railway Station. There are also villages like Padana, Bhuri Pahari, Khat, Baso and Manipura lie along the Dausa Road. In the eastern margins, there are villages like Khandar, Moi Khan, Talabra and Sawata. The villages like Behraoda, Kushalipura, Bodal, and Chhan located in the southern direction of Ranthambore National Park. The survival of these villages is generally because of the good accessibility of road and railway network and also of rich fertile alluvial soil which supports agriculture.

### RESEARCH METHODOLOGY

The study is based on both primary and secondary data-collected from site and from different published research articles, book chapters, Rajasthan government policies, reports, tourism policies, NGOs' reports, articles on Ranthambore National Park, official websites of Rajasthan Tourism and the respective national park. Qualitative approach has been adopted for collecting the empirics of the paper.

#### LITERATURE REVIEW

### Nature Protection and Conservation

The environment degradation and unplanned use of natural resources have driven the attention of tourism pioneers towards more sustainable, responsible and conservation orientated tourism practices. The higher growth in ecotourism and other new forms of tourism is expected in the near future (Ketema, 2015). The increased tourist demand in natural sites and protective areas has brought some diverse effects on the place in form of pollution, deforestation social values deprivation, leakages etc. (Gouvea, 2004). According to IUCN definition (2008), "A protected area is a clearly defined "geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values." Practices like soil erosion control; afforestation, measure against poaching etc. and indigenous progress in the field of education, infrastructure development, alternate means of livelihood etc. are the activities if highlighted at any protective area can help in nature protection, conservation of ecology and social systems.

### COMMUNITY PARTICIPATION IN PROTECTED AREAS

Although the role of local communities was negligible in protected areas before 1980 in any kind of activities regarding management and other foremost decisions in the public and area's

favor (Ruíz-Mallén et al. 2013). The information gathered from the local community and PA staff in Zimbabwe, Mutanga, Muboko, & Gandiwa (2017) brought in light the nature of their relationship and factors that influence it. The study listed the factor explicitly; communication between two parties, compensation received by locals, share in the earned benefits, participation level in tourism activities, human-wildlife conflict and the perception of PA staff and local community about each other. Discourse of local communities, staff working in PA, government officials, NGOs etc. was analyzed using Q-methodology to find out their attitude about the participation in management and governance of PA in Poland by Niedziałkowski et al. (2018). The study found three major categories of the discourse i.e. positive attitude concerning recognition and development of conservation in PA areas, cynical attitude for nature-centered and lastly, the discourse quantified difficulties faced in the management. The conversation of all the key stakeholder parties ignored the traditional management practices of centralization and stressed on impartial control by local central authorities together. The study further highlighted the issues like inadequate knowledge and interest, appalling administration practices need for effective public participation in area.

## COMMUNITY PARTICIPATION AND NATURE PROTECTION

The degree of togetherness in achieving the community goals among local community members directly influences the success of the PA (Dodds, Ali, & Galaski, 2018). From the review of 105 published articles Mutanga et al. (2015) presented a conceptual framework to assess the PAcommunity relationship. It conveyed that in forming the attitude of community and PA staff towards conservation, human-wildlife interaction plays a vital role. In addition, the study offered some factors that influence the relationship. These factors are; history of PA, cost and benefits, involvement in preservation and conservation of PA resources and socio-demographic factor. Strong PA-community relation further helps in enhancing wildlife conservation in the area. The partnership between local service providers and local residents has proved to be great success in community development as well as natural is protection. The organization of Gorilla tours with the cooperation of locals benefits them in employment, local ownership and consumption of locally produced goods and services. Apart from theses, this collaboration helps in undertaking land management measures, environment protection and conservation practices being implemented as the 5% of share of revenue generated is distributed for community projects in the area (Nielson & Spenceley, 2010). There are many practical cases available in support of the notion of working in liaison with Community based tourism. The appointment of the 'Kanchen' and the delegation of work and responsibility to villagers help in organizing various events and activities in Zemithang, Tawang district (Lepcha for WWF, ND cited by Dodds, Ali & Galaski, 2018). The formation of executive committee in Huchuy Qosco village of Peru work to carry on the monthly assemblies for decision making, problem solving and administration (Galaski, 2015). The concept of land conservation managed by local communities in support of government and NGOs is the illustration of most successful efforts embarked on in the field of natural resource management and local development in Namibia (World Resources Institute, 2005; Dodds, Ali & Galaski, 2018). The diminution participation and involvement of indigenous people in the protected areas have been discovered in many parts of the world, i.e. elimination of people in park management and decision-making (Sebotho & Toteng, 2010), diverted locals from the natural area due to government policies in the Okavango Delta area (Mbaiwa, Ngwenya & Kgathi, 2008).

## COMMUNITY PARTICIPATION AND RESOURCE MANAGEMENT AND SUSTAINABLE DEVELOPMENT

With the regular efforts by various governing bodies like Global Environment Facility Small Grants Programme (GEF-SGP) and IUCN World Conservation Congress (WCC), it has been worked out that the community participation is authorized in the PA for carrying out management actions (Sebotho & Toteng, 2010; Beltran & Phillips, 2000). Coming across the arising tensions between human and wildlife in protected area; financial compensation was declared to be provided by India government for safety of human as well as protection of biodiversity (Johnson, Karanth & Weinthal, 2018). Nature and wildlife conservation. optimum utilization of resources cannot be achieved with the sole role of the Protected area's governing bodies, but the local stakeholders need to pay equal proportion of their efforts in this regard (Calvet-Mir et al., 2015). To enhance knowledge, skills; training and capacity building; programs are organized for a community of South Africa known as Makuleke (Sebele, 2010). Community empowerment and development should be emphasized by the governing bodies in collaboration with the endogenous people. Community-driven-development is the term studies under community-based-development which means the direct control and decisionmaking lies in the hand of community (Mansuri & Rao, 2004; Dodds, Ali & Galaski, 2018; Dangi & Jamal, 2016) where community empowerment is considered to be a mix-up of four elements i.e. social, psychological, political, and economic improvement (Scheyvens, 1999; Scheyvens, 2002). In another study of community participation in the Moremi Game Reserve area in Botswana; Sebotho & Toteng (2010) disclosed the negligence participation of local community in the management exercises in the area. In order to decrease conflict, offer improved alternative sources of livelihoods and reduce reliance on government the study emphasized on the Man and Biosphere framework. The framework aims at achieving ecological sustainable development, improved livelihood, maintained ecological and genetic materials and suitable use of resources by taking into consideration the logistic role and conservation role that need to play in core and buffer zone, and finally the framework suggested development role to carry out in the buffer and transition zone to minimize human-wildlife conflicts (Sebotho & Toteng, 2010), According to Mutanga et al. (2017), Bruyere et al. (2009) and Molina et al. (2016), the bi-polar perceptions of the Protected Aare staff and the local community regarding benefitsharing and communication; lay emphasis on the need of exploring the in-depth scenario of the particular site in order to develop and formulate the elucidation of conservation and nature protection.

### ECO TOURISM APPROACH IN RANTHAMBORE NATIONAL PARK

Today there is a requirement of eco-tourism approach in the protected areas and the importance has been given designing, preparation and applying eco-tourism projects. Some of the issues which need to be tackled while encouraging local participation in Eco-Tourism:

- Participation of local people.
- Empowerment should be the main objective.
- Involvement of local people in the project cycle.
- Building stake holders.

- To link benefits with nature protection.
- To distribute benefits among all local people.
- To involve community leaders.
- To understand the conditions of sites.
- To evaluate and monitor progress.

The study has found some major implications to implement in the protective area. It is found that Ranthambore is rich in diversity and tourism resources to offer to tourists. Wildlife tourism is the major source of business in Ranthambore National Park for Sawai Madhopur district. The district earns 350 Crores from wildlife tourism every year that is the foremost contribution on the local economy with in the park revenue estimated to reach 30 million rupees in 2017-2018. There are around twelve hundred tourist vehicles and two thousand hotel rooms in Ranthambore. At present administrators of preserved areas are blistered due to stress of tourism and the imperative management's demand. It is important to prevent tourist areas by steering the growth of tourism and making tourists to admire such natural areas. The main management objectives are treated as most important course of actions:

- 1. The flora and fauna of Ranthambore National Park should be protected and improved.
- 2. To uphold viability, tigers population for economic, systematic, cultural, artistic and environmental values during the total ecological protection of the complete wildlife and vegetation.
- 3. To enlarge eco-tourism areas beyond the scaled inner area.
- 4. Buffer zone should be preferred to develop the fuel wood, productivity grasses, and other group of plantations to lessen pressure on the area of core zone.
- 5. The village people should be motivated through rewards for their contribution towards the welfare of national park.
- 6. To increase ecological and social-economic studies.
- 7. To improve the effectiveness of the workers through right training and proper infrastructure.

# ISSUES AND REMEDIES IN RESOURCE MANAGEMENT AND NATURE PROTECTION

### ILLEGAL GRAZING

There is a problem of illegal grazing inside the RNP mainly in between July to October due to the movement of domestic animals of nearby villages into the park area. The adverse impacts of illegal grazing in the Ranthambore National Park (RNP) are:

- a. The core area of national park is affected through the illegal grazing.
- b. There are also the chances of contagious diseases in the wild animals.
- c. There is also the problem of deforestation in national park due to illegal forest.

To control the illegal grazing there are various steps taken by the managers:

- 1. To reduce the illegal grazing inside the park area, and
- 2. To protect the national park the management body discusses with the villagers.
- The management bodies carefully study the community village wise and also try to identify the financial issues of the graziers before planning.

#### POACHING

The process of stealing animals and to hunt them without the permission of landowner is called poaching. The national park is the most susceptible area for poaching and its boundary is squishy. The vicinity of RNP is not so much dense and there can be movement of Tiger towards national park to centre. There is also high population of leopards and hunters entered illegally in the park area for poaching.

The steps taken by resources managers to improve conditions of RNP are as follows:

### MOBILITY

There is also criminal activity in the park area. The management is providing safety and security to reduce the crime. There is also facility of fireman around the park area to control any disaster due to fire. The resource managers also have control over mining activities.

### ENCROACHMENT AND MINING CONTROL

The main problem in Ranthambore tiger reserve is of encroachment cases. Villages which faced this encroachment problem are Talvada, Hindwa, Bhuri Pahadi, Padra, and Basso and they are also situated in the boundary of tiger reserve.

Some of the problems which are faced by resource managers are as follows:

- a. The separation in the boundary is not clear and most of the pillars in boundary are missing.
- b. There is a very little awareness among field staffs and they are not familiar with the boundaries.
- c. To resolve the disputes there is a lack of adequate survey staff.

To check this problem there are some steps mentioned below:

- a. In the park areas there should be proper patrolling so that managers can know about any break of the boundaries line.
- b. All the removed pillars and broken one should be replaced.
- c. There should be proper maintenance of every land records.
- d. Mining and encroachment cases must be the main concern.
- e. There should be requirement of protection walls around the park area.

Some of the programmes which should be taken up in the Ranthambore National Park:

## INTEGRATED LIVESTOCK DEVELOPMENT PROGRAM

There is a great stress on natural resources like water, vegetation and livestock due to rising income level. Therefore, the prime concern is to maintain level of consumption, production, productivity and population at sustainable level. The wild animals such as non–domesticated animals are facing the challenge of survival because of reduced area of their habitat. There should be proper training of farmers for these programmes and also by increasing the productivity by using new technology and improve productivity.

## LIVESTOCK DEVELOPMENT CENTRE (LDC)

This programme conducts training on environment protection and improved livestock. It provides services of artificial insemination by using exotic breeds. There should also be deforming of milk producing animals should be done at regular period. To handle infertility cases there should also be cattle camps.

### IMMUNIZATION PROGRAM

There is also risk of various diseases which are infectious from domestic animals like cattle, sheep, goat, buffalo etc. to wild animals. These animals in core areas usually suffer from foot and mouth disease, black quarter and hemorrhagic septicemia. These all diseases are transmittable from livestock to wild animals.

### CONCLUSION

Ranthambore National Park is one of the major wildlife tourist destinations for Rajasthan. The rich and diverse flora and fauna, local culture and traditions are the key attractions for visitors. The ecotourism and sustainable tourism are being flourished in the area due to community participation and the government initiatives. It can be concluded that the partnership between local service providers and local residents has proved to be great success in community development as well as natural is protection. A number of issuers and problems were investigated in the protective area such as poaching, illegal grazing, encroachment etc. A few strategies and suggestions are provided by the study to conserve and protect the natural resources in the area and for better management of resources. The government has taken some initiatives and programs in this regard such as Integrated Livestock Development Program, Livestock Development Centre and Immunization Program etc. It can be conclude that the park authorities and the government need to work in close liaison with the local communities for better results in the protection of the area.

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